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SEDIMENTARY BASINS OF AUSTRALIA

A GLOSSARY OF NOMENCLATURE

Compiled by

S. Irving, E. J. Smith, and J. Walker

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Bureau of Mineral Resources,
Canberra.

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INTRODUCTION

This document is the first draft of a glossary of nomenclature of sedimentary basins in Australia; the purpose of the compilation is to provide a history of nomenclature for each formally named sedimentary basin as a basis for reviewing nomenclature, particularly where more than one name has been used.

The draft is circulated at this time specifically for the use of the Committee for the Tectonic Map of Australia, Geological Society of Australia, as a useful basis for discussion of the formal names to be used on the forthcoming tectonic map. As a longer term project, however, it is hoped that this draft may lead to the rationalization of nomenclature of sedimentary basins, and perhaps of other major tectonic or structural units, and to the formulation of some general rules to guide authors in the naming of structural features.

In this draft the heading used, where more than one name has been applied to a basin, is that which appears to be the most generally accepted; this may in fact have priority, e.g. Gippsland Basin, or take the form of a revision which has been generally accepted, e.g. Carnarvon Basin. In cases where the original name has been superseded but with no stated reason for the change, e.g. Cameoweal Basin, the name with priority has been used for the heading.

It is realized that this draft will be incomplete; comments, corrections and omissions will be gratefully received and will assist in completing the glossary.

ADELAIDE BASIN — Tertiary

REPORT OF THE FIRST INTERSTATE CONFERENCE ON ARTESIAN WATER, 1913, Sydney. App. V. & W, 185-189.

The ADELAIDE PLAINS (ARTESIAN) BASIN was estimated to extend over an area of 967 square miles, and its limits delineated on the basis of BROWN'S map of South Australia for which no date was given. Subsequent reports of Interstate Conferences on Artesian Water (1922, 1925, 1929) continued to show the BASIN on maps without adding any further information.

DAVID (1932, p.117) included the ADELAIDE PLAINS BASIN in a table of artesian basins, and gave its age as Oligocene to Recent, and its area as approximately 600 square miles. WARD (1946, p.78) called it the ADELAIDE PLAINS ARTESIAN BASIN and estimated its extent as 1,130 square miles. He described it as lying between the Mount Lofty Ranges and Gulf St. Vincent with its eastern margin formed by the multiple-fault front of the highlands.

The Explanatory Notes accompanying the 1953 Geological Map of South Australia (1955, p.5) named the ADELAIDE BASIN as one of the major Tertiary sedimentary basins in the State, and described it as including the present Spencer Gulf and Gulf St. Vincent, with outcrops of Tertiary rocks confined to small areas near Adelaide, in the Noarlunga and Willunga Basins, at Kingscote (Kangaroo Island), on Yorke Peninsula, and west of Port Augusta.

The Bureau of Mineral Resources, Geology and Geophysics map of Australia, Elements of Geology and Structure, 1956, names the ADELAIDE BASIN as a principal sedimentary basin.

ADELAIDE GEOSYNCLINE — Proterozoic-Cambrian

SPRIGG, R.C., 1952 - Sedimentation in the Adelaide Geosyncline and the formation of the Continental Terrace. Univ. of Adelaide, Sir Douglas Mawson Anniversary Volume, 153-159.

In DAVID 1950 (p.90) a LOWER ADELAIDEAN GEOSYNCLINE was illustrated made up of a N-S FLINDERS TROUGH in South Australia, an E-W AMADEUS TROUGH in the Northern Territory and a probable westward extension into Western Australia.

SPRIGG (pp. 153, 155) described the location of the ADELAIDE GEOSYNCLINE between the West Australian continental shield and the Willyamia block in South Australia.

ÖPIK (1956c, p.273) called Sprigg's area the ADELAIDEAN or FLINDERS GEOSYNCLINE.

AMADEUS BASIN — Upper Proterozoic
Cambrian
Ordovician

CHEWINGS, C., 1935 - The Pertatataka Series in Central Australia with notes on the Amadeus Sunkland. Trans.Roy.Soc.S.Aust. 59, 141-163.

CHEWINGS proposed the name LAKE AMADEUS SUNKLAND for the huge rift between two shield areas, the Arunta and Pitjentara, in the western MacDonnell Ranges. "The Sunkland has been caused by the foundering of a huge block, 200 miles long for certain, and probably much more, east and west. At the Western Australian border it is 50 to 60 miles broad, at Lake Amadeus 100, and at Alice Springs 130. It appears to have been formed as the result of isostatic depression, and the cause probably the great load of sediments" (p.151).

CHEWINGS stated that the Sunkland could easily be distinguished from the shields as its surface was almost entirely composed of the Larapinta Series of Ordovician rocks.

ANDREWS (1938) referred to the area as the MADCONNELL TROUGH (p.135) and the MACDONNELL GEOSYNCLINE (P.141), in which Ordovician sedimentation had followed on Cambrian until 6,000 feet of deposits had accumulated.

DAVID (1950, p.91) referred to the basin as the AMADEUS TROUGH, and believed it may have been connected with the FLINDERS TROUGH to the south, and "continued by a channel to the north-west on the site of the DESERT BASIN".

JOKLIK (1952, p.21) was of the opinion that the AMADEUS DEPRESSION was a gentle down-warp or syncline rather than a graben structure as postulated by CHEWINGS.

HOSSFELD (1954, p.137) referred to the geosynclinal (sic) sediments resting on the Arunta Complex and separating the Musgrave and Arunta blocks, as the AMADEUS GEOSYNCLINE. He gave the maximum width of the feature as 100 to 160 miles and its known extension as 300 miles with a possible continuation of 150 miles into Western Australia (ELLIS, 1936, p.68). HOSSFELD also stated "If the postulated continuity of the AMADEUS with the FLINDERS-MT. LOFTY GEOSYNCLINE is accepted, there exists a known length of at least 1,000 miles with unknown extensions to the west".

OPIK (1956b, p.34) used the name "AMADEUS GEOSYNCLINE" in discussing sedimentation in the area.

The name AMADEUS BASIN appeared on a map produced by the Bureau of Mineral Resources, Geology and Geophysics, and published in the International Stratigraphic Lexicon of Queensland (1956, opp. p.12).

ARGYLE BASIN — Cambrian

MATHESON, R.S. & TEICHERT, C., 1946. Geological reconnaissance in the eastern portion of the Kimberley Division, Western Australia. Ann.Rep.Dep.Min.W.Aust. for 1945, 73-87.

The name ARGYLE BASIN was proposed for one of three major structural basins in the large area of the Ord River drainage basin in Western Australia (p.75). It is a small area of Cambrian sediments 25 miles long and 7 miles wide near Argyle Downs Homestead. Its long axis strikes N.E.-S.W., and it is faulted along its north-west side against Precambrian and other rocks (p.79).

TRAVES (1955, p.9) called the Argyle Basin a topographic rather than a depositional unit, but retained the name.

BONAPARTE GULF BASIN — Palaeozoic

REEVES, F., 1951 - Australian Oil Possibilities. Bull.Am.Ass.Pet.Geol., 35 (12), 2479-2525.

Early maps published in connection with the Inter-State Conference on Artesian Water instigated in 1912 indicate this area as the GULF BASIN, but give no south-eastern boundary for it.

MATHESON and TEICHERT (1946, p.75) formally named much the same area the BURT RANGE BASIN (q.v.). They stated that it was previously unmapped, and that from ground observations and aerial photographs, it was clear that the BASIN continued into the Northern Territory in a north-easterly direction with only its south-western end situated in Western Australia.

TEICHERT (1947, p.127) stated: "many maps showing the distribution of artesian basins in Australia indicate a 'Gulf Basin' in this general vicinity, although I have been unable to discover on what evidence the assumption of this basin could have been based. It is possible that the Burt Range Basin continues in this general direction and includes this or similar Permian areas".

REEVES (1951, p.2498) without referring to any previous terminology, called this area the BONAPARTE GULF BASIN and described it as an area of Palaeozoic rocks bordering the Bonaparte Gulf on the north-west coast of Australia. The land part of the BASIN together with the shallow bays and inlets indenting it, was about 200 miles long and 30-50 miles wide, and covered an area of 7,000 square miles. He included the shallow seas which extended 10-20 miles offshore as a submerged part of the BASIN.

NOAKES, OPIK, and CRESPIN (1952, p.92) followed REEVE's nomenclature "because the name 'Bonaparte Gulf', referring to a wider area, is more appropriate than 'Burt Range' which is situated in the south-eastern corner of the Basin....". They referred to it as a structural unit.

TRAVES (1955, p.9) used the name BONAPARTE GULF BASIN for all the Palaeozoic sediments in the Joseph Bonaparte Gulf. Within the BONAPARTE GULF BASIN he retained the name BURT RANGE BASIN for the particular section of Palaeozoic sediments which formed the Burt Range, and named a further subdivision, the CARLTON BASIN, for the area of Middle Palaeozoic sediments north and east of Carlton Station.

BOWEN BASIN — Permo-Carboniferous
Triassic

REID, J.H., 1924-25. Geology of the Bowen River coalfield. Qld.Govt.Min.J., 25, 399-411; 447-466; 26, 4-11. (This paper was republished, slightly modified, as REID, J.H., 1929. Geology of the Bowen River coalfield. Qld.geol.Surv. Pub., 276).

Although JACK (1879) had carried out early investigations in this area of Queensland, REID was the first to name the BOWEN BASIN and emphasize its synclinal structure.

HILL (1951, p.14) preserved this name for one of her ten structural units within the Tasman geosyncline. She described the BOWEN BASIN as a huge miogeosynclinal structure which warped downwards at least from the beginning of Permo-Carboniferous times, into the Triassic. "To the south, the basin plunges under the strata of the Great Artesian Basin, and at the western junction of the two, a region of shelf sedimentation (the Springsure Shelf) seems to have extended out onto the southern part of the old Drummond Basin, around the southern plunging edge of the Anakie Anticline" (p.17).

REEVES (1951, p.2485) referred to this area as the DAWSON-MACKENZIE BASIN of Permian age, and indicated it on a map of Australia showing the sedimentary basins (p.2480). MOTT (1952) called it the BOWEN SYNCLINE. The Atlas of Australian Resources (1953) labelled it the DAWSON-MACKENZIE BASIN. WHITEHOUSE (1953, p.88) commented on the BASIN as an area of sedimentation, referring to it as the BOWEN BASIN and BOWEN SYNCLINE. FAIRBRIDGE (1953, p.VII/57) quoted a description by BRYAN and JONES (1947) in which the 400 mile long by 150 mile wide area was referred to as the GREAT BOWEN SYNCLINE, as well as the BOWEN BASIN.

WHITEHOUSE (1955, p.59) defined the BOWEN SYNCLINE as extending south from Collinsville between Cracow and Springsure, and being covered by beds of the GREAT ARTESIAN BASIN. The offshoot of the BASIN in the Taroom district is a continuation of the BOWEN SYNCLINE. He stated (p.2): "undoubtedly, a case could be made out for including the late Permo-Carboniferous sediments of the Bowen Syncline (and the extension from them around the Drummond Range) in the artesian sequence, since such beds dip under the valid beds of the artesian basin and carry pressure water. But it is felt that to include these would be carrying the limits too far."

BULDIVA-WISO BASIN — Proterozoic-Cambrian

HOSFELD, P.S., 1954. Stratigraphy and structure of the Northern Territory of Australia. Trans.Roy.Soc.S. Aust., 77, 103-161.

HOSFELD (p.133) used the term BULDIVA-WISO BASIN for the area extending from the Douglas River southwards "probably as far as the sector west of Tennant Creek" in the Northern Territory. The area, indicated on a map (p.132), lies west of the Ashburton Peninsula which separates it from the area shown as the BARKLY BASIN. He also referred to it as the BULDIVA BASIN.

BURT RANGE BASIN — Middle Palaeozoic

MATHESON, R.S., & TEICHERT, C., 1946. Geological reconnaissance in the eastern portion of the Kimverley Division, Western Australia. Ann.Rep.Dep.Min.W.Aust. for 1945, 73-87.

MATHESON and TEICHERT (p.75) were the first to use the name BURT RANGE BASIN formally for the area previously shown on maps as the GULF BASIN - a small basin situated north of Argyle Station in Western Australia. The name was taken from the Burt Range in which they found the greatest development of Upper Devonian and younger Palaeozoic rocks.

NOAKES, OPIK, and CRESPIN (1952, p.92) followed REEVE's (1951) who referred to the area as the BONAPARTE GULF BASIN (q.v.). NOAKES et al. stated that, "the name 'Bonaparte Gulf', referring to a wider area, is more appropriate than 'Burt Range' which is situated in the south-eastern corner of the Basin".

TRAVES (1955, p.9) used the name BONAPARTE GULF BASIN to refer to all the Palaeozoic sediments which crop out in the vicinity of Joseph Bonaparte Gulf, and BURT RANGE BASIN for the area of sediments deposited in an embayment and which now form Burt Range.

BURT TROUGH — Tertiary-Recent

HOSSFELD, P.S., 1954. Stratigraphy and structure of the Northern Territory of Australia. Trans.Roy.Soc.S. Aust., 77, 103-161.

HOSSFELD (p.154) suggested the name BURT TROUGH for the largest of the structural features known as the Burt Plain (Birt Plain of JENSEN, 1944, p.87) and filled by Recent sediments bounded by the Archaeozoic rocks of the Arunta Complex. He gave STUART TROUGH as an alternative name should BURT TROUGH be considered confusing in view of the existence of the BURT RANGE BASIN in Western Australia (p.155). He included two similar basins, the PLENTY and HALL PLAINS, as being continuations of the system responsible for the BURT TROUGH. He also indicated that underlying sediments were at least of Tertiary and probably Mesozoic age.

CAMOOWEAL BASIN — Proterozoic-Cambrian

DAVID, T.W.E., 1932 - Explanatory notes to accompany a new geological map of the Commonwealth of Australia. Counc.sci.ind.Res.Aust.

DAVID (1932, p.118) first named this area of the Northern Territory the CAMOOWEAL BASIN. He used this term to denote the eastern end of an extensive belt of limestone which ran from the Western Australia border beyond Wave Hill north-eastwards to near Katherine and on to Camooweal and Boulia. He stated that it was a sub-artesian basin of Cambrian to Proterozoic age, and that the groundwaters from the limestones reinforced the intake beds of the GREAT ARTESIAN BASIN (q.v.) near Boulia.

In discussing the Barkly Group, sediments deposited in transgressive seas of Middle Cambrian time, in the Barkly Region, NOAKES and TRAVES (1954, p.37) stated that the earlier of two transgressions "From the north-westerly quarter submerged most of the areas now known as the Barkly Basin and the Georgina Valley". The second sea finally submerged the land ridge between these two areas about the longitude of Camooweal (p.38). A Lower Cretaceous sea also invaded the area at least as far as latitude 18°, although its limits have not been clearly established (p.38). The Barkly Group sediments "are near to horizontal with probably basin structures beneath the Barkly Basin and the Georgina Valley." The BARKLY BASIN appeared on the geomorphological map which accompanied the publication.

HOSSFELD (1954, p.133) called the easterly geographical division of the Buldivan Series the BARKLY BASIN, and stated that it extended in a south-easterly direction into Queensland. He indicated it on a map (p.132) as lying between the Ashburton Peninsula and the Gulf of Carpentaria in an area almost identical with that shown for the CARPENTARIA BASIN on a map on page 130.

ÖPIK (1956c, p.242) in describing the palaeogeography of the Barkly Tableland, stated: "It is sometimes referred to as the 'Barkly Basin', but no basin structure is evident...".

CANNING BASIN Palaeozoic-Mesozoic

REPORT OF THE INTERSTATE CONFERENCE ON ARTESIAN WATER, 1912. Sydney, 1913.

The name DESERT BASIN was first used for the sedimentary basin between the Kimberley and Pilbara Precambrian blocks in Western Australia on a map of artesian basins accompanying the Report of the Interstate Conference on Artesian Water, 1912 (1913). Prior to this, WARBURTON (1875) had used the name GREAT SANDY DESERT for a similar region in the Kimberley District. TALBOT (1910) traversed the Canning Stock Route and gave a geological account of this desert area. MAITLAND (1919, p.4) outlined the limits of the DESERT BASIN as far as was known. CLARKE (1926, p.128) called MAITLAND's artesian basin area the CANNING REGION after the man who laid out the stock route across it and showed it on a map of natural regions (opp. p.132). BLATCHFORD (1927) published results of investigations in the northern part which he called the FITZROY BASIN (p.9). He spoke of the extensive Carboniferous beds found in the area (p.12).

FORMAN (1930, p.21) described the DESERT BASIN as a geosynclinal unit occupied by rocks of Upper and Lower Carboniferous age, probably underlain by Devonian strata. On the south-east, south and west the BASIN sediments gave way to rocks of the Nullagine Formation, while along the coast they were overlain by Jurassic sediments, in turn covered in places by late Tertiary formations. A map (opposite p.22) outlined the boundary of the BASIN.

TEICHERT (1939, p.85) regarded the DESERT and NORTH-WEST BASINS as part of one structural unit, the WESTRALIA GEOSYNCLINE. He later suggested other alternatives (1947, p.133). He reviewed the succession in the northern or Fitzroy River area with particular reference to the Permian (1947, p.95), and said that the accepted area of the BASIN of 140,000 square miles might be an underestimate (1947, p.128).

RUDD (1951, p.7) referred to the DESERT BASIN as the KIMBERLEY BASIN. REEVES (1951, p.2489) called it the DESERT BASIN, referred to its northern quarter as the FITZROY BASIN, and described it as bordering the Indian Ocean for 350 miles south-east of King Sound, and extending inland for more than 450 miles.

GENTILLI and FAIRBRIDGE (1951, p.4) described the CANNING (or DESERT) BASIN as a large Permian basin, probably over 150,000 square miles of land and 60,000 of continental shelf, overlain by Jurassic sediments near the coast, with outcrops of earlier Palaeozoic sediments, Devonian being the best known, along the north-eastern border. The BASIN, under both names, was indicated as a physiographic region on the accompanying map.

TRAVES, et al (1956, p.11) attributed the name CANNING BASIN to GENTILLI and FAIRBRIDGE (1951) and used it throughout their report on the south-western portion of the area. They expressed the probability that Palaeozoic sedimentation over the Precambrian basement had commenced at the latest in Lower Ordovician times in the BASIN, and continued through to the Tertiary.

CARLTON BASIN — Middle Palaeozoic

TRAVES, D.M., 1955. The geology of the Ord-Victoria region, Northern Australia. Bur.Min.Resour.Aust.Bull. 27.

TRAVES (p.9) introduced the name CARLTON BASIN for a small area of Middle Palaeozoic sediments which crop out north and east of Carlton Station in Western Australia. These lie within the larger structural basin called the BONAPARTE GULF BASIN (q.v.).

CARNARVON BASIN — Upper Palaeozoic, Mesozoic, Tertiary

CONDON, M.A., JOHNSTONE, D. and PERRY, W.J., 1953 - The Cape Range Structure, Western Australia. Bur.Min.Resour. Aust. Bull. 21. Defined. CONDON, M.A., 1954. Progress report on the stratigraphy and structure of the Carnarvon Basin, Western Australia. Rep.Bur.Min.Resour.Aust., 15.

The First Inter-State Conference on Artesian Water (1913) used the name NORTH-WEST BASIN on a map of Australia showing the artesian water basins as then known, and outlined its limits as extending from the "mouth of the Murchison River to somewhere about North-West Cape, thus covering about 6 degrees of latitude with a maximum width of over 130 miles" (p.120, App. by MAITLAND). In 1907, MAITLAND (p.8) had described and indicated on a map the position of Carboniferous water-bearing strata from south of Dongara to north of Point Charles just north of Carnarvon in Western Australia, along the coast and extending inland to Mullewa, Bindoo and Geraldine. WOODWARD (1907, p.10) referred to the southern portion of the basin as the GASCOYNE ARTESIAN AREA.

CLAPP (1925, p.50) compared the stratigraphic divisions of the NORTH-WEST and DESERT BASINS (q.v.). TEICHERT (1939, p.85) included the NORTH-WEST BASIN as a part of the WESTRALIA GEOSYNCLINE (q.v.). He also called it the NORTH-WEST ARTESIAN BASIN. In 1947, he stated (p.130) that the sediments of the Basin "do not shape themselves into a true basin. It would be perhaps more correct to call it a 'half-basin'...". He enlarged on his idea of the similar origin of the NORTH-WEST and DESERT BASINS as parts of the WESTRALIA GEOSYNCLINE.

CONDON, et al. (1953, p.7) used the name CARNARVON BASIN which subsequent authors have generally adopted. CONDON (1954, p.1) gave the maximum compiled thickness of Middle Devonian to Permian sediments in the eastern part of the Basin as 19,000 feet, and that of Middle Jurassic to possibly Pliocene sediments as 3,600 feet.

A map of the CARNARVON BASIN - Regional Structure, prepared by the Bureau of Mineral Resources, Canberra, July, 1956 (WA54-14) divided the area into several minor basins, namely: GASCOYNE BASIN; ONSLOW BASIN; MERLINLEIGH BASIN; BYRO BASIN and COOLCALALAYA BASIN.

CARPENTARIA BASIN — Lower Proterozoic, Mesozoic to Recent

GENTILLI, J., and FAIRBRIDGE, R.W., 1951 - Physiographic Diagram of Australia. The Geographical Press, Columbia University, New York.

The CARPENTARIA BASIN was named (p.3) and indicated on the accompanying map, as an area of about 260,000 square miles of which nearly 170,000 are submerged and form the Gulf of Carpentaria. MOTT (1952) proposed the name for the area marginal to the GREAT ARTESIAN BASIN, north from the Euroka Shelf, fringing and including the Gulf of Carpentaria. He referred to it as a subdivision of the GREAT ARTESIAN BASIN.

The ATLAS OF AUSTRALIAN RESOURCES (1953) called it the CAPE YORK BASIN. NOAKES (1953, p.287) referred to the CARPENTARIA GEOSYNCLINE as one of the loci of sedimentation in the Northern Territory in Lower Proterozoic time, and outlined it on a map (p.285). RAGGATT (1954) also adopted the name.

WHITEHOUSE (1955), in subdividing the GREAT ARTESIAN BASIN, called the same area the GULF BASIN which is too easily confused with the earlier usage of this name for what is now known as the BONAPARTE GULF BASIN.

COLLIE BASIN — Permian

WOODWARD, H.P., 1915 - The coal resources of Western Australia. Bull.geol.Surv.W.Aust., 64, 7-11.

MAITLAND (1899, p.13) referred to reports on the coalfield since its discovery about 1890, and stated (p.14) that the coal measures had been deposited in a comparatively unsymmetrical shallow erosion basin. He included a geological map of the coalfield but did not delimit the boundaries of the Basin.

WOODWARD (1915, p.7) wrote: "The Collie Basin is situated in a depression at the back or to the eastward of the Darling Range". He reported (p.9) that the controversy over the age of the deposits had been resolved. There was general agreement that the coal was Permo-Carboniferous rather than Mesozoic. WOOLNOUGH (1916) mapped the COLLIE COAL BASIN in his report on the area and MAITLAND (1939) also discussed the deposits of the COLLIE BASIN.

TEICHERT (1947, p.101) described the COLLIE BASIN, with reference to LIMB and KENT (1939), as situated 100 miles south of Perth, well outside the Coastal Plain on the Precambrian shield, and having an area of not less than 100 square miles. He indicated it on a map together with the WILGA BASIN (q.v.) (p.96). The total thickness of Permian sediments he estimated as not less than 2,000 feet.

Reporting on the first detailed geological survey of the area (p.15), LORD (1952) stated that a tongue of Precambrian rocks divided the area into two basins (p.105); the Main or Collie section, and a NORTH-EASTERN BASIN extending to Muja. He outlined these on a map (opp. p.204).

FAIRBRIDGE (1953, p.VII/20) described both the COLLIE and MUJA BASINS (MAIN and NORTH-EASTERN) as elongated north-west to south-east and more or less oval in shape. The 17 mile long COLLIE BASIN was connected by a low sill with the 13 mile long MUJA BASIN situated to the east.

COWELL ARTESIAN BASIN — Tertiary-Recent

WARD, L.K., 1946. The occurrence, composition, testing, and utilization of underground water in South Australia, and the search for further supplies. Geol.Surv. S.Aust.Bull.23.

WARD (p.88) spoke of a typical one-sided artesian basin or slope on the eastern side of Eyre Peninsula, north-east and south-west of Franklin Harbour, with an area of 635 square miles, in South Australia, as the COWELL ARTESIAN BASIN.

DALY RIVER BASIN — Cambrian

NOAKES, L.C., 1949. A geological reconnaissance of the Katherine-Darwin Region, Northern Territory. Bur.Min.Resour.Bull. 16.

Sediments of the Cambrian Daly River Group were stated to lie in a structural basin to which the name DALY RIVER BASIN was applied (p.22). The basin was also mapped as a physiographic unit (opp. p.12).

DIXON RANGE BASIN — Cambrian

MATHESON, R.S. and TEICHERT, C., 1946. Geological reconnaissance in the eastern portion of the Kimberley Division, Western Australia. Ann.Rep.Dep.Min.W.Aust. for 1945, 73-87.

The DIXON RANGE BASIN is one of two divisions of the HARDMAN BASIN (q.v.) in Western Australia, being separated from the MOUNT ELDER BASIN to the north by the Kelly Creek anticline (p.79). The Basin is "elongated (about 65 miles long and 30 miles wide) with the Ord River flowing almost along its middle line" (p.80). It is "truncated near its south-western end by a major N.W.-S.E. trending fault zone, the Hardman Fault" (p.79).

DONNYBROOK SUNKLAND — Mesozoic

GENTILLI, J. and FAIRBRIDGE, R.W., 1951 - Physiographic Diagram of Australia. The Geographical Press, Columbia University, New York.

This name was used (p.3) for about 2,500 square miles of country south-west of the Yilgarn Block in Western Australia. MAITLAND (1939) discussed the Donnybrook Sandstone Formation occupying most of the area. GENTILLI and FAIRBRIDGE (p.3) wrote: "The main section of the Donnybrook Sunkland reaches about 400 feet, and is covered by Mesozoic (possibly Triassic) continental sediments".

ERADU BASIN — Permian

TEICHERT, C., 1947. - Stratigraphy of Western Australia. J.Roy.Soc.N.S.W., 80 (3), 81-142.

TEICHERT (p.100) referred to the ERADU BASIN as a non-marine sedimentary basin where conglomerate, sandstones and shales, with interbedded coal seams, have been found to a

a depth of about 1200 feet, in the Greenough River area of the South-West Division of Western Australia. The BASIN was indicated on a map (p.96).

BLATCHFORD (1930, p.15) did not mention the basin by name, but referred to Carboniferous strata in the Greenough District first recognized by GREGORY in 1860, and the first suggestion of the probability of coal seams in the Eradu area made by WOODWARD in 1888.

EROMANGA BASIN — Mesozoic

MOTT, W.D., 1952. - Oil in Queensland. Qld.Govt. Min.J., 53 (612), 848-861.

The EROMANGA BASIN was named by MOTT as a subdivision of the GREAT ARTESIAN BASIN. It is situated west from Charleville in Queensland, its northern limit being the Euroka Shelf extending from Cloncurry to Croydon (p.849). According to MOTT it extended south and east to the boundary of the Eulo Shelf and the Neebine Ridge. The name has not been used in other structural divisions of the GREAT ARTESIAN BASIN. A small portion of the area appears to correspond to a part of what HILL (1951, p.14) called the DRUMMOND BASIN.

ESK BASIN — Permo-Carboniferous Triassic

HILL, D., 1951 - Geology. Handbook of Queensland. Aust.Ass.Adv.Sci., 28th Meeting, Brisbane, 13-24.

The ESK BASIN was named by HILL (p.14) as a subdivision of the TASMAN GEOSYNCLINE. It was indicated on a map (p.15) as being situated west of the MARYBOROUGH BASIN, elongated in a narrow north-south belt southward to Esk. It was probably formed in Permo-Carboniferous times, and received terrestrial sedimentation during the Triassic (p.19).

WHITEHOUSE (1953, p.85) described the ESK BASIN from HILL and stated, "In pre-Ipswich times this narrow depression, between the D'Aguilar block to the east and the Yarraman block to the west, would appear to have been an intermontane basin of internal drainage, rapidly subsiding." He further stated (p.86) that sedimentation produced progressive extension, and that in the south massive conglomerates eventually become the thick basal conglomerates of the coal measures of the IPSWICH COAL BASIN.

EUCLA BASIN — Middle Tertiary

BROWN, H.Y.L., 1900 - Geological map of South Australia, Adelaide.

BROWN (1900) published a geological map of South Australia, approximately defining the limits of the EUCLA BASIN in this State and the First Inter-State Conference on Artesian Water (1913) based the map accompanying the Conference Report on it. On the latter map the name EUCLA BASIN was used synonymously with NULLABOR PLAINS BASIN for the large area in Western Australia extending across into South Australia along the coast of the Great Australian Bight, and inland well north of the Transcontinental Railway on the Nullarbor Plain. The area of the part of the Basin

in South Australia was estimated as 21,000 square miles.

MAITLAND (1897, 1900, 1910) recognized the importance of the artesian water bearing strata in the Nullarbor Plains area and extended the mapping of it in Western Australia.

WARD (1946, p.74) described the EUCLA ARTESIAN BASIN as being 68,460 square miles in extent, 16,460 square miles of which lay in South Australia and 52,000 square miles in Western Australia. He described the mid-Tertiary deposits overlying Precambrian rocks and gave their maximum thickness as 570 feet.

The ATLAS OF AUSTRALIAN RESOURCES (1954) estimated a total area of 69,000 square miles for the EUCLA BASIN.

FLINDERS TROUGH — Upper Proterozoic Cambrian

DAVID, T.W.E. (ed. Browne, W.R.), 1950 - THE GEOLOGY OF THE COMMONWEALTH OF AUSTRALIA. Arnold, London.

DAVID (p.90) illustrated the position of the Lower Adelaidean Geosyncline which he divided into the Amadeus Trough in the Northern Territory and the Flinders Trough in South Australia occupying the present position of the Mt. Lofty and Flinders Ranges. The probable area of the trough was given as about 200 miles wide and at least 800 miles long. Hossfeld (1954, p.137) used the term Flinders - Mt. Lofty Geosyncline when referring to the area in South Australia.

GEORGINA BASIN — Cambrian

JACK, R.L., 1895. Stratigraphical notes on the Georgina Basin, with reference to the question of artesian water. Proc.Roy.Soc.Qld, 11(1), 70-74.

JACK used this name in the title of his paper apparently in a geographical sense only, as he made no further reference to it in the text. DAVID (1932, p.118) included the area referred to by JACK in his CAMOOWEAL BASIN (q.v.). WHITEHOUSE (1936, p.64) mentioned "the basin of the Georgina River" and included a map showing the "geology of the Georgina Basin". DAVID (1950, p.115) referred to the GEORGINA REGION as having an area of 60,000 square miles, partly in western Queensland and partly in eastern Northern Territory, with most of it lying in the basin of the Georgina River. Boundaries of the region were shown on a sketch map entitled "The Geology of the Georgina Basin" (after WHITEHOUSE, 1936). DAVID (p.116) said that the broad structure appeared to be that of a shallow synclinal basin or trough with sub-meridional axis.

REEVES (1951, p.2485) recorded the GEORGINA BASIN as a sedimentary basin, and indicated it on a map (p.2480) as an area similar to that known as the Barkly Tableland. NOAKES and TRAVES (1954, p.39) mentioned the GEORGINA BASIN as an internal drainage basin. STEWART (1954, p.43) gave the GEORGINA BASIN DIVISION as a geomorphological unit of the Barkly Region and indicated the GEORGINA BASIN on the accompanying map.

TRAVES and STEWART (1954, p.60) used the name to denote a surface hydrological or drainage unit.

RAGGATT (1954) and CONDON (1956) both showed the GEORGINA BASIN on accompanying maps but did not define it in their texts. ÖPIK (1956a, p.3) used GEORGINA BASIN in the sense of a drainage basin.

GIPPSLAND BASIN — Tertiary

REPORT OF THE FIFTH INTERSTATE CONFERENCE ON ARTESIAN WATER, Sydney, 1929.

In this Report, on a map of Victoria showing artesian basins, a small area on the coast of Victoria at Lakes Entrance was called the GIPPSLAND BASIN. The basin had appeared on maps published with reports of earlier conferences (1922) but had not been named.

CRESPIN (1943) writing on the area, referred to it as the GIPPSLAND TERTIARY BASIN. RUDD (1951, p.8) called it the GIPPSLAND BASIN and estimated its area as approximately 2,000 square miles. REEVES (1951, p.2485) described it as a sedimentary basin and estimated an extent of 1,800 square miles, with a length of 160 miles and width of 5-20 miles.

THE ATLAS OF AUSTRALIAN RESOURCES (1953) referred to the EAST GIPPSLAND BASIN (p.4) stating that it was not strictly a structural basin and reporting an area of only 400 square miles.

THOMAS (1955, p.11) used the term EAST GIPPSLAND ARTESIAN BASIN and outlined it on a map (p.10).

GREAT ARTESIAN BASIN — Mesozoic

PITTMAN, E.F., 1895 - Note on the Cretaceous rocks in the north-western portion of New South Wales. Aust.Ass. Adv.Sci., 6, 344-348.

PITTMAN (p.345) used the term ARTESIAN BASIN in describing the known extent of the "Cretaceous or water-bearing" rocks in the north-western portion of New South Wales. The Report of the First Interstate Conference on Artesian Water (1913, p.13) discussed the possible outlets of the GREAT AUSTRALIAN BASIN and indicated the BASIN by this name on the accompanying map. JACK (1923, p.316) used the term GREAT AUSTRALIAN ARTESIAN BASIN. DAVID (1932, p.119) described the GREAT ARTESIAN BASIN as approximately 1,270 miles long from north to south, and 900 miles from east to west. He also referred to it as the GREAT BASIN and described the area of zones of replenishment (p.120).

ANDREWS (1938) used both terms, GREAT AUSTRALIAN ARTESIAN BASIN (p.127) and GREAT ARTESIAN BASIN (p.142). WARD (1946, p.45) described the GREAT ARTESIAN BASIN as having an approximately triangular form with the apex at Cape York, and the irregular base line extending from Kingoonya in South Australia to Dubbo in New South Wales. He gave its greatest breadth as 1,120 miles and length from Cape York to the southern boundary as 1,395 miles. He mentioned the EASTERN BORDER BASIN on the boundary of South Australia extending into New South Wales, and the SICCUS BASIN to the south of Lake Frome and north of the Boolcoomata Ranges, as subsidiary basins perched above or marginal to the GREAT ARTESIAN BASIN (p.66).

REEVES (1951, p.2517) used GREAT ARTESIAN BASIN and spoke of it as a broad shallow structural basin covering an area of 600,000 square miles and occupied principally by Jurassic and Cretaceous formations. GENTILLI and FAIRBRIDGE (1951, p.5) used the name GREAT ARTESIAN BASIN but gave a smaller area for it.

WHITEHOUSE (1953, p.84) first used the structural term AUSTRAL GEOBASIN. He later defined three sub-basins within its area (1955): the LAURA OFFSHOOT BASIN or LAURA BASIN (p.4); the THALLON SUB-BASIN or THALLON BASIN for the deepest part east of the Nebine Ridge (p.16); and the THOMSON SUB-BASIN or THOMSON BASIN for the main part lying between the Nebine Ridge and the Euroka Shelf (p.16). He also proposed the name GULF BASIN for the northernmost depression of the AUSTRAL GEOBASIN bounding the Gulf of Carpentaria and including the shallow continental shelf. This area corresponds with that of the CARPENTARIA BASIN (q.v.). The term GULF BASIN could be confused with earlier usage for what is now known as the BONAPARTE GULF BASIN.

SPRIGG (1957, p.12, unpubl.) recognized two additional sub-basins: the ARKARINGA SUB-BASIN west of the Adelaide-Alice Springs Railway; and the LAKE EYRE SUB-BASIN in north-east South Australia.

HARDMAN BASIN — Cambrian

MATHESON, R.S. and TEICHERT, C., 1946 - Geological reconnaissance in the eastern portion of the Kimberley Division, Western Australia. Ann.Rep.Dep.Min.W.Aust. for 1945, 73-87.

The name HARDMAN BASIN was proposed (p.79) for an area of Cambrian rocks in Western Australia, 75 miles long and 35 miles wide, which had previously been known as the "ORD RIVER BASIN". The Basin is divided by the Kelly Creek anticline into two sections, the MT. ELDER BASIN (q.v.) in the north, and the larger DIXON RANGE BASIN (q.v.) to the south. The MT. ELDER BASIN extends eastward into the Northern Territory, and the DIXON RANGE BASIN is truncated near its south-western end by the Hardman Fault.

The basin appeared unnamed on the map published with the Report of the First Inter-State Conference on Artesian Water (1913).

REEVES (1951, p.2485) referred to the ORD RIVER BASIN as having an area of 5,000 square miles, and thickness of sediments (partly marine) of 3,000 feet.

TRAVES (1955, p.8) used "ORD BASIN" as a topographic division to describe the area drained by the Ord River, and the name HARDMAN BASIN for the basin of Cambrian sediments as above, although he considered it (p.9) a topographic rather than a depositional unit.

IPSWICH-CLARENCE BASIN — Mesozoic

REEVES, F., 1951. Australian oil possibilities. Bull.Am.Ass.Pet.Geol., 35(12), 2479-2525.

REEVES (p.2585) gave an area of 9,000 square miles for the coastal strip north and south of Brisbane which he

called the IPSWICH-CLARENCE BASIN, shown on a map (p.2480). JACK and ETHERIDGE (1892, p.321) referred to an area of about 12,000 square miles in the south-eastern corner of Queensland occupied by the Ipswich Coal Field of upper Triassic-Jurassic age.

JENSEN (1912, p.164) described the CLARENCE BASIN sandstones and Ipswich coal measures laid down in the epicontinental sea when the Mesozoic uplift of New England took place.

DAVID (1950, p.457) described the CLARENCE BASIN as a structural and physiographic unit extending from the Queensland border south into New South Wales for 120 miles with a maximum width of 65 miles. He mentioned isolated outcrops of Jurassic freshwater lake deposits similar to those of the GREAT ARTESIAN BASIN, in the south-east of Queensland and CLARENCE BASIN of north-east New South Wales (p.448). In the Ipswich area sediments were estimated to have a thickness of 8,500 feet. The deposits in the CLARENCE BASIN, measured to a depth of 3,370 feet, could be correlated with the Queensland succession.

WHITEHOUSE (1953, p.86) referred to deposits in the IPSWICH COAL BASIN and to areas around Brisbane as the MORETON BASIN (q.v.). In 1955, he called this area the MORETON OFFSHOOT BASIN.

IRWIN BASIN — Permian

REEVES, F., 1951 - Australian oil possibilities. Bull.Am.Ass.Pet.Geol., 35 (12), 2479-2525.

CAMPBELL (1910) described the Irwin River District in Western Australia and the geological data compiled since coal was first reported in 1846 in the Irwin Coalfield. DAVID (1932, p.64) referred to this area of Permian deposits as the Irwin River Coalfield.

TEICHERT (1947, p.126) stated that the northern end of the PERTH BASIN was known as the Irwin River District.

REEVES (p.2502) showed the IRWIN BASIN on a map between the Urella Fault and Precambrian shield in the northern sector of his COASTAL PLAIN BASIN. He also gave a section (p.2503) of the IRWIN BASIN.

JACK BASIN — Devonian-Carboniferous

HILL, D., 1951 - Geology in Handbook of Queensland. Aust.Ass.Adv.Sci., 28th Meeting, Brisbane, 13-24.

HILL (p.14) named the JACK BASIN as one of ten structural divisions of the TASMAN GEOSYNCLINE (q.v.). She described it as an elongated region lying east of the Chillagoe Belt and west of the North Coastal High, and containing three lesser basins. These from north to south she called the HODGKINSON BASIN, the STAR BASIN, and the DRUMMOND BASIN. Sediments in each were deposited unconformably on the older rocks beginning in upper Middle Devonian times and continuing, with the possible exception of the HODGKINSON BASIN, into the Lower Carboniferous. The JACK BASIN may have been either an intramontane structure between the highlands of the North Coastal High and the Anakie Anticline, or a marginal geosyncline in Queensland (p.16).

JERUSALEM BASIN — Triassic

STRZELECKI P.E. de, 1845. PHYSICAL DESCRIPTION OF NEW SOUTH WALES AND VAN DIEMAN'S LAND, London.

The area described for this Tasmanian BASIN (p.123) included the Derwent Valley as far north as Hamilton and Bothwell, together with the Richmond and Coal River valleys. Its extent to the south and east were indicated only by the geological features observable on Maria Island and Tasman's Peninsula. The walls of the BASIN appeared to have a contemporaneous origin, but coal seams were described in a section (p.127). The coal from this area is now considered to be Triassic in age (HILLS et al, 1922)

KAMILAROI BASIN — Permo-Carboniferous

DULHUNTY, J.A., 1942 - The stratigraphical arrangement and occurrence of torbanite deposits in the Upper Kamilaroi coal measures of New South Wales. Proc.Linn.Soc.N.S.W. 67, 123-141.

The term Kamilaroi was introduced by DAVID (1932, p.61) as a time term covering the deposition of rocks previously referred rather vaguely to the Permo-Carboniferous. DULHUNTY (1942, p.123) used the term Kamilaroi Basin for the basin of deposition of these rocks in New South Wales.

LAUNCESTON TERTIARY BASIN — Tertiary

JOHNSTON, R.M., 1875 - The Launceston Tertiary Basin. Pap.Roy.Soc.Tas. for 1874. 6, 53-62.

JOHNSTON (1875) and ETHERIDGE (1881) were the first to refer specifically to the LAUNCESTON TERTIARY BASIN in Tasmania. HILLS et al (1922, p.7) mentioned it as the only important area of Tertiary sedimentary rocks in Tasmania and gave its extent as approximately 600 square miles. CAREY (1947) discussed the geology of the 112 square mile Launceston District centred about the city of Launceston but did not mention the BASIN by name.

LORNE BASIN — Triassic

VOISEY, A.H., 1939. The Lorne Triassic Basin and associated rocks. Proc.Linn.Soc.N.S.W., 64, 255-265.

VOISEY (p.255) named the geological structure made up of Triassic rocks and drained by the Camden Haven River in N.S.W. the LORNE TRIASSIC BASIN. DAVID (1950, p.416) mentioned the basin-structure and described its extent as 16 miles from the Manning River north almost to Wauchope, and from the coast to the eastern edge of the Comboyne Plateau.

MARYBOROUGH BASIN — Permo-Carboniferous Mesozoic

HILL, D., 1951 - Geology. Handbook of Queensland. Aust.Ass.Adv.Sci., 28th Meeting, Brisbane, 13-24.

This BASIN was named by HILL as a major subdivision of the TASMAN GEOSYNCLINE (p.14) and shown on the accompanying map (p.15) as extending along the coast of Queensland from north of Brisbane to just north of Bundaberg, with an inland

bulge centering around Maryborough. HILL (p.19) described the MARYBOROUGH BASIN or SHELF as one-sided, its eastern margin being under the sea and its true nature not yet clear. It was said to have begun as a region of marine sedimentation in Permo-Carboniferous times, continued as a continental basin in the Triassic and Jurassic, been inundated by a sea in Aptian times, and received coal measures in the Upper Cretaceous.

MOTT (1952) showed the MARYBOROUGH BASIN on a map, but did not clearly demarcate its limits.

MORETON BASIN — Mesozoic

WHITEHOUSE, F.W., 1953 - The Mesozoic environments of Queensland. Aust.Ass.Adv.Sci., 29, 83-106.

WHITEHOUSE first used this name (p.100) with a footnote to the effect that it was being proposed elsewhere for "the region of the cross graben and sediment-filled extensions of it, east of the New England block, that continues south into the Clarence Basin of New South Wales". MOTT (1952) recognised and used the same name.

WHITEHOUSE (1955, p.4) introduced the name MORETON OFFSHOOT BASIN for a basin area distinct from the GREAT ARTESIAN BASIN, east of Toowoomba in south-east Queensland.

MT. ELDER BASIN — Cambrian

MATHESON, R.S. and TEICHERT, C., - Geological reconnaissance in the eastern portion of the Kimberley Division, Western Australia. Ann.Rep.Dep.Min.W.Aust. for 1945, 73-87.

The MT. ELDER BASIN is the smaller of two sections of the HARDMAN BASIN (q.v.) being separated from the DIXON RANGE BASIN to the south by the Kelly Creek anticline (p.79). The Basin is oblong with its longer axis tending N.W. - S.E. and is situated in "a sub-rectangular area formed by the lower course of the Negri River and by the Ord River upward from its junction with the Negri" (p.79). The name is taken from Mt. Elder near the Northern Territory border in Western Australia, and the Basin extends eastward in the direction of and beyond Mt. Panton into the Northern Territory.

MURRAY BASIN — Mesozoic-Tertiary

WOODS, J.E.T., 1883. Physical structure and geology of Australia. Proc.Linn.Soc.N.S.W. 7, 371-389.

The naming of this basin resulted from the division of Tertiary beds into several basins. WOODS (p.381) stated that the MURRAY BASIN included not only the basin of that river, but passed across the colony of Victoria, extending to the western side of Port Phillip and North Tasmania.

The naming of this basin was discussed at the First Interstate Conference on Artesian Water held in Sydney in 1912 (1913). It was regarded as previously unnamed. PITTMAN proposed calling it the TERTIARY SUB-ARTESIAN or TERTIARY BASIN. WARD's suggestion (p.31) that it be known as the MURRAY RIVER TERTIARY BASIN was adopted although it appeared on accompanying maps as the MURRAY BASIN, the MURRAY RIVER

BASIN, and the MURRAY RIVER TERTIARY BASIN. Later conferences (1914, 1921, 1924, 1929) used either MURRAY BASIN or MURRAY RIVER BASIN.

WARD (1946, p.67) called it the MURRAY RIVER ARTESIAN BASIN and gave its extent as 107,250 square miles, with 52,173 square miles in New South Wales, 26,808 square miles in Victoria, and 28,269 square miles in South Australia.

REEVES (1951, p.2513), using the name MURRAY RIVER BASIN, gave a total area of 90,000 square miles and described it as occupying 330 miles of the South Coast between the Otway Range of Victoria and the Mt. Lofty Range of South Australia, and extending inland 250 miles to include most of the Murray River drainage basin below Mildura. He outlined it on a map of sedimentary basins (p.2480).

GENTILLI and FAIRBRIDGE (1951, p.5) described the MURRAY BASIN as oval in shape, over 100,000 square miles in area, and separated from the Great Artesian Basin by the Wilcannia Threshold.

THOMAS (1955, p.10) called it the MURRAY ARTESIAN BASIN.

PERTH BASIN

Permian
Jurassic
Cretaceous
Eocene

ANDREWS, E.C., 1938 - The structural history of Australia during the Palaeozoic. J.Roy.Soc.N.S.W., 71, 118-187.

ANDREWS (p.121) mentioned the PERTH BASIN as one of the sunken stable areas in Western Australia. He indicated it on a map (opp. p.168) as occupying the southern coastal strip continuous with the NORTH)WEST BASIN to the north.

TEICHERT (1947, p.126) called it the SOUTH-WEST COASTAL BASIN and described it as 350 miles long, 10-30 miles wide, and located between 33°40' and 28°50'S. lat. Its northern end was known as the Irwin River District. Permian, Jurassic, Cretaceous, Tertiary and Pleistocene deposits are much concealed under Recent sand deposits. The BASIN, its structure little known (p.131), appeared on a map (p.124).

REEVES (1951, p.2501) described the COASTAL PLAIN BASIN as occupying the coastal strip north and south of Perth, with a length of 450 miles and width of 10-60 miles. Sediments of Permian, Jurassic, Cretaceous, Eocene, and Quaternary ages probably totalled a thickness of over 7,000 feet. REEVES attributed most of his information on this BASIN, without acknowledging specific references, to FAIRBRIDGE, who also prepared the geological sketch of the COASTAL PLAIN BASIN which appeared on pages 2502-2503. The BASIN embraced the Permian deposits of the IRWIN BASIN (q.v.), and a Quaternary coastal strip north and south of Perth called on the map the PERTH SUNKLAND.

GENTILLI and FAIRBRIDGE (1951, p.3) called the area the SWAN COASTAL BELT, and gave its area as about 16,000 square miles of land and 18,000 of continental shelf.

THYER and EVERINGHAM (1956, p.1) described the PERTH BASIN as a sedimentary basin lying between Geraldton and Cape Leeuwin on the west coast of Australia, separated from the Precambrian shield by the Darling Scarp (p.2).

PINE CREEK GEOSYNCLINE — Lower Proterozoic

NOAKES, L.C., 1953 - The structure of the Northern Territory with relation to mineralization. Geology of Australian ore deposits, 5th Emp.Min.metall.Cong., 1, 284-296.

NOAKES (p.287) referred to the PINE CREEK GEOSYNCLINE as one of the centres of sedimentation during the Lower Proterozoic in the Northern Territory, and showed it on a map (p.285).

CONDON and WALPOLE (1955, p.3) described the PINE CREEK GEOSYNCLINE as a belt extending about 200 miles southeast from Darwin to Maranboy, with a maximum width of 120 miles.

PIRIE-TORRENS BASIN — Pleistocene to Recent

REPORT OF THE THIRD INTERSTATE CONFERENCE ON ARTESIAN WATER, 1922, Adelaide.

A CONFERENCE map of South Australia named the PORT PIRIE BASIN, and showed it extending from Broughton, north to Quorn on the eastern side of Spencer's Gulf, with an area of 654 square miles. Later CONFERENCE maps (1929) called it the PIRIE-TORRENS BASIN and extended it to the northern end of Lake Torrens.

JACK (1930, p.31) discussed the hydrological aspects of the PIRIE-TORRENS BASIN. DAVID (1932, p.117) tabled its age as Pleistocene to Recent, its approximate area as 4,000 square miles, and depth to water-bearing strata as shallow to 600 feet.

WARD (1946, p.86) referred to it as the PIRIE-TORRENS ARTESIAN BASIN and gave its area as not less than 3,585 square miles. He described it as a typically one-sided basin, bounded on the east by the major structural break which brings Spencer Gulf as far north as Port Augusta, and which continues farther north for 150 miles to Lake Torrens.

GENTILLI and FAIRBRIDGE (1951, p.5) described the TORRENS GRABEN, containing Lake Torrens, as 180 miles long, up to 50 miles wide, bounded by faults on east and west, and filled with Tertiary and Quaternary deposits.

PORT PHILLIP BASIN — Tertiary-Recent

REPORT OF THE FIFTH INTERSTATE CONFERENCE ON ARTESIAN WATER, Sydney, 1929.

The accompanying map of artesian basins showed and named the PORT PHILLIP BASIN. Earlier Conference maps (1922, 1925) had indicated the area without naming it. The Atlas of Australian Resources, Underground Water (1953, p.6) described the PORT PHILLIP BASIN in Victoria as a sunkland bounded by faults, containing Quaternary deposits overlying basalts and Tertiary sediments.

THOMAS (1955, p.11) called it the PORT PHILLIP ARTESIAN BASIN and described it as extending in Tertiary rocks from the Werribee Plains beneath Port Phillip Bay. He gave the western margin as the Rowsley Fault and the granitic monadnocks of the You Yangs, and the eastern limit as the Selwyn Fault, although the exact boundaries were not known. He showed it on a map (p.10).

ROSEWOOD BASIN — Cambrian

MATHESON, R.S. and TEICHERT, C., 1946. Geological reconnaissance in the eastern portion of the Kimberley Division, Western Australia. Ann.Rep.Dep.Min.W.Aust. for 1945, 73-87.

The ROSEWOOD BASIN derived its name from the Rosewood Homestead in Western Australia. It is about 40 miles long and 11 miles wide, striking N.E.-S.W. roughly parallel to the ARGYLE BASIN to the north, and extends into the Northern Territory (p.79). MATHESON and TEICHERT, who proposed the name, stated (p.81) that only the north-eastern end of the Basin had actually been explored, but that its extent could be plotted fairly accurately from aerial photographs.

TRAVES (1955, p.9) referred to the ROSEWOOD BASIN in the Ord River area as a topographic rather than depositional unit, but retained the name.

SOUTH ESK BASIN — Triassic

STRZELECKI, P.E. de, 1845 - PHYSICAL DESCRIPTION OF NEW SOUTH WALES AND VAN DIEMAN'S LAND, London.

STRZELECKI (p.123) placed the formation of this BASIN in his "Third Epoch" and described the locality as confined partly to the vales of Avoca and Break-o'-day, and partly to the country watered by the Macquarie and Blackman's Rivers in Tasmania. He stated that the walls of the BASIN appeared to have a contemporaneous origin, but went on to describe (p.124) a section from St. Patrick's Head to Ben Lomond which included a coal seam. The coal from this area is now considered to be Triassic in age (HILLS et al, 1922).

STANWELL ARTESIAN BASIN — Triassic-Jurassic

DUNSTAN, B., 1898 - The Mesozoic coal measures of Stanwell, and associated formations. Parliamentary Paper, Brisbane.

PITTMAN (1914, p.18) referred to DUNSTAN'S description of a small isolated artesian basin at Stanwell, 16 miles south-west of Rockhampton, Queensland, and reproduced a section of the BASIN from DUNSTAN'S paper indicating the Triassic-Jurassic sandstone present.

SURAT BASIN — Mesozoic

MOTT, W.D., 1952 - Oil in Queensland. Qld.Govt. Min.J., 53 (612), 848-861.

According to MOTT the SURAT BASIN forms the south-easterly part of the GREAT ARTESIAN BASIN in Queensland. He believed that the floor of this BASIN probably emerged in New South Wales.

SYDNEY BASIN — Palaeozoic Triassic

JENSEN, H.I., 1912 - The building of eastern Australia. Proc.Roy.Soc.Qld., 23(2), 149-198.

STRZELECKI (1845, p.123) called an area drained "by tributaries of the Hunter and Hawkesbury Rivers" and containing coal seams, the NEWCASTLE BASIN. He described a massive deposit of sandstone which reached its southern extent about Illawara and suggested that it converged towards the County of Cumberland, the probable centre of the BASIN (p.126).

JENSEN (p.165) stated that Sydney had been the centre of a great geosyncline in New South Wales during all periods up to the Permo-Carboniferous and during "coal-measures" time. The synclinal nature of the SYDNEY BASIN closed with the Triassic.

REEVES (1951, p.2521) described the SYDNEY BASIN as a triangular area bordering the coast for 100 miles north and south of Sydney, and extending inland 75-150 miles. He outlined it on a map of sedimentary basins (p.2480) and stated that it included the Western and Southern coalfields, and the coalfields in the Lower Hunter Valley (p/2521).

TARWIN ARTESIAN BASIN — Tertiary?

THOMAS, D.E., 1955 - Underground water. Min.Geol. J. 5, 5-12.

THOMAS (p.10) indicated a small coastal area in Victoria on a map and called it the TARWIN ARTESIAN BASIN, stating (p.11) that the geological environment of the Tarwin area on the South Gippsland coast suggested the existence of this small artesian basin of which little is known.

TASMAN GEOSYNCLINE — Palaeozoic

SCHUCHERT, C., 1928 - Review of late Palaeozoic formations and faunas, with special reference to the ice-age of mid-Permian times. Bull.Am.geol.Soc., 39.

SCHUCHERT used the term TASMAN GEOSYNCLINE for a geosyncline occupying the area between much of the east coast of Australia and a hypothetical lost land to the east referred to as Tasmantis. SUSSMILCH (1935, p.84) adopted this term in his discussion of the Carboniferous period, although he noted the fact that REID had used the name CAPRICORNIAN GEOSYNCLINE for the Queensland portion of it. He illustrated the extent of the TASMAN GEOSYNCLINE on a map.

HILL (1951, p.15) also showed the TASMAN GEOSYNCLINE on a map, between the GREAT ARTESIAN BASIN and the east coast of Queensland. She divided it into ten structural regions of which five were basins, namely: the JACK BASIN; the BOWEN BASIN; the YARROL BASIN; the ESK BASIN; and the MARYBOROUGH BASIN (p.14).

UNDILLA BASIN — Middle Cambrian

ÖPIK, A.A., 1956a - Cambrian palaeogeography of Australia, in El Sistema Cambrico, su Paleogeografia y el Problema de su Base, part 2, Int.geol.Cong., 20th Sess., Mexico, 239-284.

According to ÖPIK (p.275) the UNDILLA BASIN was initiated and filled entirely within the Middle Cambrian. Situated in north-western Queensland (ÖPIK, 1956b, p.5), its structural position is shelf, with shores to west and north, and epicontinental sea to south and east (1956a, p.275). It was deposited as an autogeosyncline with concurrent subsidence and sedimentation, but lacks geosynclinal magnitude.

WALLOWAY ARTESIAN BASIN — Lower Tertiary

WARD, L.K., 1946 - The occurrence, composition, testing, and utilization of underground water in South Australia, and the search for further supplies. Bull.geol. Surv.S.Aust., 23.

WARD (p.87) described this South Australian Basin as being relatively small and of the valley type, and one which "has been found to exist on the broad plain which extends northwards from the Hundred of Black Rock Plain through the Hundred of Walloway, where its width is greatest, and the Hundred of Oladdie". The effective area of the Basin had not been precisely defined, but an earlier estimate of its extent, which WARD felt may have been low, was 45 square miles.

WARRAMUNGA GEOSYNCLINE — Lower Proterozoic

NOAKES, L.C., 1953 - The structure of the Northern Territory with relation to mineralization. Geology of Australian ore deposits, 5th Emp.Min.metall.Cong., 1, 284-296.

NOAKES (p.287) named the WARRAMUNGA GEOSYNCLINE as one of three centres of sedimentation in the Northern Territory during Lower Proterozoic time, and indicated it on a map (p.285) between the Sturtian and Arunta Blocks.

JOKLIK (1955, p.21) mentioned the WARRAMUNGA GEOSYNCLINE to the north of the Arunta Block.

WATERHOUSE BASIN — Middle Cambrian

WALPOLE, B.P., 1958 - The Maranboy Tinfield, Northern Territory. Bur.Min.Resour.Aust.Bull.37.

WALPOLE (p.16) stated that the present physiographic unit of the Waterhouse River basin in the Katherine-Darwin region of the Northern Territory represents the limits of the original Middle Cambrian depositional basin. He called it the WATERHOUSE BASIN.

WERRIE BASIN — Upper Palaeozoic

CAREY, S.W., 1934 - The geological structure of the Werrie Basin. Proc.Linn.Soc.N.S.W., 59, 351-374.

"Definition. - For the great trough, nearly fifty miles in length, which centres on Werris Creek, and stretches away towards the Namoi River in the north-north-west, and to within a few miles of the Liverpool Range in the south, the name Werrie Basin is proposed. The town of Werris Creek is at the centre of the basin, and the Werrie basalts cover more than a hundred square miles of the country within its boundary." (CAREY, 1934, p.351).

WESTERN DISTRICT BASIN — Mesozoic-Tertiary?

ATLAS OF AUSTRALIAN RESOURCES - Underground Water, 1953. Dept.Nat.Dev., Canberra.

RUDD (1951, p.8) referred to a sedimentary basin area extending from the Murray Valley area of South Australia into south-west Victoria, but did not name it. The Atlas of Australian Resources - Underground Water (1953, p.7) stated that the WESTERN DISTRICT BASIN in western Victoria appeared to be an offshoot of the MURRAY BASIN, but that there was little information concerning it.

THOMAS (1955, p.10) described it as extending eastwards from the South Australian border and south of the Western Highlands, to merge with the PORT PHILLIP ARTESIAN BASIN farther east.

WESTERN PORT BASIN — Tertiary-Quaternary

ATLAS OF AUSTRALIAN RESOURCES - Underground Water, 1953. Dept.Nat.Dev., Canberra.

The WESTERN PORT BASIN was described (p.5) as covering the Western Port sunkland on the south coast of Victoria. Bounded by two faults, it contains Tertiary and Quaternary deposits.

THOMAS (1955, p.10) indicated the area on a map of artesian basins, and called it the WESTERN PORT ARTESIAN BASIN (p.11). He described it as including the area around and beneath Western Port Bay bounded by the Tyabb Fault on the west, and the Heath Hill Fault on the east.

WESTRALIAN GEOSYNCLINE — Upper Palaeozoic-Mesozoic Tertiary

TEICHERT, C., 1939 - The Mesozoic transgressions in Western Australia. Aust.J.Sci., 2(3), 84-86.

TEICHERT (p.84) proposed the name WESTRALIAN GEOSYNCLINE for the southward continuation of the Timor-East Celebes Geosyncline of the East Indies and postulated it as representing the Australian section of a continuous geosynclinal trough bordering the Australia-New Guinea Shield on the west. He outlined this possible structural unit on a map (p.85). It included the CANNING and CARNARVON BASIN areas. He later (1947, p.133) emphasized the differences in the depositional and orogenetic history of the two sections of the trough and suggested an alternative interpretation (p.134) of the origin of the Western Australian Basins.

WILGA BASIN — Permian

TEICHERT, C., 1947 - Stratigraphy of Western Australia. J.Roy.Soc.N.S.W., 80 (3), 81-142.

TEICHERT (p.101) described the WILGA BASIN as lying south-south-east of the COLLIE BASIN in Western Australia, with at least 700 feet of sediments including coal seams. He indicated it, together with the COLLIE BASIN on a map (p.96). FAIRBRIDGE (1953, VII/20) referred to it as being 9 miles long, and lying 20 miles south of Collie within the area of the Precambrian shield.

WILSON (1922, p.30) discussed the deposits of the Wilga Coalfield, with a plan showing its relation to the Collie Coalfield (p.37), but made no mention of the BASIN as such.

WILLOCHRA BASIN — Tertiary

WARD, L.K., 1946. The occurrence, composition, testing, and utilization of underground water in South Australia, and the search for further supplies. Geol.Surv. S.Aust., 23.

WARD (p.88) called the elongated valley traversed by Willochra Creek in South Australia the WILLOCHRA VALLEY ARTESIAN BASIN. He stated that it constituted a typical basin of valley type, and gave its approximate area as 595 square miles.

O'DRISCOLL (1956, p.7) called it the WILLOCHRA BASIN and showed its extent and location on a map (frontispiece). He gave the length of the depression as some 50 miles and its maximum width as 10 miles. It has not been established whether or not the valley is a graben structure but it shows some such characteristics including strong faulting along the western flank.

WILLUNGA BASIN — Tertiary-Recent

COCHRANE, G.W., 1956 - The geology and hydrology of the Willunga Basin. Geol.Surv.S.Aust.Rep. of Investigations 8.

The BASIN was described (p.1) as the area bounded by the Willunga Range, Onkaparinga River and Gulf St. Vincent in South Australia, in which a succession of Tertiary to Recent sediments occur. It has an area of approximately 60 square miles (p.2), and is shown on a locality plan.

YARROL BASIN — Devonian
Permo-Carboniferous

HILL, D., 1951 - Geology. Handbook of Queensland. Aust.Ass.Adv.Sci., 28th Meeting, Brisbane, 13-24.

The YARROL BASIN was named as a subdivision of the TASMAN GEOSYNCLINE (p.14). It originated as a long intramontane marine basin continuous from near Broad Sound through Rockhampton, Mount Morgan and Yarrol to south of Mundubbera, where it disappears under the GREAT ARTESIAN BASIN, to reappear again on the New South Wales border near Texas (p.18). It was termed an idiogeosyncline, and it probably had its origin in the Upper Middle Devonian.

AUSTRALIAN SEDIMENTARY BASINS

ADELAIDE BASIN

ADELAIDE GEOSYNCLINE

ADELAIDEAN GEOSYNCLINE - see ADELAIDE GEOSYNCLINE

ADELAIDE PLAINS ARTESIAN BASIN
ADELAIDE PLAINS BASIN
} see ADELAIDE BASIN

AMADEUS BASIN

AMADEUS DEPRESSION
AMADEUS GEOSYNCLINE
AMADEUS SUNKLAND
AMADEUS TROUGH
} see AMADEUS BASIN

ARGYLE BASIN

ARKARINGA SUB-BASIN - see GREAT ARTESIAN BASIN

ARTESIAN BASIN
AUSTRAL GEOBASIN
} see GREAT ARTESIAN BASIN

BARKLY BASIN - see CAMOOWEAL BASIN

BONAPARTE GULF BASIN

BOWEN BASIN

BOWEN SYNCLINE - see BOWEN BASIN

BULDIVA BASIN - see BULDIVA-WISO BASIN

BULDIVA-WISO BASIN

BURT RANGE BASIN - see also BONAPARTE GULF BASIN

BURT TROUGH

BYRO BASIN - see CARNARVON BASIN

CAMOOWEAL BASIN

CANNING BASIN

CAPE YORK BASIN - see CARPENTARIA BASIN

CAPRICORNIAN GEOSYNCLINE - see TASMAN GEOSYNCLINE

CARLTON BASIN - see also BONAPARTE GULF BASIN

CARNARVON BASIN

CARPENTARIA BASIN - see also GREAT ARTESIAN BASIN

CARPENTARIA GEOSYNCLINE - see CARPENTARIA BASIN

CLARENCE BASIN - see IPSWICH-CLARENCE BASIN

COASTAL PLAIN BASIN - see PERTH BASIN

COLLIE BASIN

COOLCALALAYA BASIN - see CARNARVON BASIN

COWELL ARTESIAN BASIN

DALY RIVER BASIN

DAWSON-MACKENZIE BASIN - see BOWEN BASIN

DESERT BASIN - see CANNING BASIN

DIXON RANGE BASIN

DONNYBROOK SUNKLAND

DRUMMOND BASIN - see JACK BASIN

EAST GIPPSLAND BASIN - see GIPPSLAND BASIN

EASTERN BORDER BASIN - see GREAT ARTESIAN BASIN

ERADU BASIN

EROMANGA BASIN

ESK BASIN

EUCLA ARTESIAN BASIN - see EUCLA BASIN

EUCLA BASIN

FITZROY BASIN - see CANNING BASIN

FLINDERS TROUGH

GASCOYNE ARTESIAN AREA, GASCOYNE BASIN - see CARNARVON BASIN

GEORGINA BASIN

GEORGINA BASIN DIVISION, GEORGINA REGION - see GEORGINA BASIN

GIPPSLAND ARTESIAN BASIN - see GIPPSLAND BASIN

GIPPSLAND BASIN

GIPPSLAND TERTIARY BASIN - see GIPPSLAND BASIN

GREAT ARTESIAN BASIN

GREAT AUSTRALIAN ARTESIAN BASIN - see GREAT ARTESIAN BASIN

GREAT BOWEN SYNCLINE - see BOWEN BASIN

GREAT SANDY DESERT - see CANNING BASIN

GULF BASIN - see BONAPARTE GULF BASIN and CARPENTARIA BASIN

HALL PLAINS BASIN - see BURT TROUGH

HARDMAN BASIN

HODKINSON BASIN - see JACK BASIN

IPSWICH-CLARENCE BASIN

IPSWICH COAL BASIN - see IPSWICH-CLARENCE BASIN

IRWIN BASIN - see also PERTH BASIN

JACK BASIN

JERUSALEM BASIN

KAMILAROI BASIN

KIMBERLEY BASIN - see CANNING BASIN

LAKE AMADEUS SUNKLAND - see AMADEUS BASIN

LAKE EYRE SUB-BASIN - see GREAT ARTESIAN BASIN

LAUNCESTON TERTIARY BASIN

LAURA BASIN
LAURA OFFSHOOT BASIN } see GREAT ARTESIAN BASIN

LORNE BASIN

LORNE TRIASSIC BASIN - see LORNE BASIN

MACDONNELL GEOSYNCLINE
MACDONNELL TROUGH } see AMADEUS BASIN

MAIN BASIN - see COLLIE BASIN

MARYBOROUGH BASIN

MARYBOROUGH SHELF - see MARYBOROUGH BASIN

MERLINLEIGH BASIN - see CARNARVON BASIN

MORETON BASIN

MT. ELDER BASIN

MUJA BASIN - see COLLIE BASIN

MURRAY ARTESIAN BASIN - see MURRAY BASIN

MURRAY BASIN

MURRAY RIVER ARTESIAN BASIN
MURRAY RIVER BASIN
MURRAY RIVER TERTIARY BASIN
} see MURRAY BASIN

NEWCASTLE BASIN - see SYDNEY BASIN

NORTH-EASTERN BASIN - see COLLIE BASIN

NORTH-WEST ARTESIAN BASIN
NORTH-WEST BASIN
} see CARNARVON BASIN

NULLARBOR PLAINS BASIN - see EUCLA BASIN

ONSLOW BASIN - see CARNARVON BASIN

ORD BASIN
ORD RIVER BASIN
} see HARDMAN BASIN

PERTH BASIN

PERTH SUNKLAND - see PERTH BASIN

PIRIE-TORRENS ARTESIAN BASIN - see PIRIE-TORRENS BASIN

PIRIE-TORRENS BASIN

PLENTY PLAINS BASIN - see BURT TROUGH

PORT PHILLIP ARTESIAN BASIN - see PORT PHILLIP BASIN

PORT PHILLIP BASIN

PORT PIRIE BASIN - see PIRIE-TORRENS BASIN

ROSEWOOD BASIN

SICCUS BASIN - see GREAT ARTESIAN BASIN

SOUTH ESK BASIN

SOUTH-WEST COASTAL BASIN - see PERTH BASIN

STANWELL ARTESIAN BASIN

STAR BASIN - see JACK BASIN

SURAT BASIN

SWAN COASTAL BELT - see PERTH BASIN

SYDNEY BASIN

TARWIN ARTESIAN BASIN

TASMAN GEOSYNCLINE

TERTIARY BASIN
TERTIARY SUB-ARTESIAN BASIN
} see MURRAY BASIN

THALLON BASIN
THALLON SUB-BASIN
THOMSON BASIN
THOMSON SUB-BASIN
} see GREAT ARTESIAN BASIN

TORRENS GRABEN - see PIRIE-TORRENS BASIN

UNDILLA BASIN

WALLOWAY ARTESIAN BASIN

WARRAMUNGA GEOSYNCLINE

WATERHOUSE BASIN

WERRIE BASIN

WESTERN DISTRICT BASIN

WESTERN PORT ARTESIAN BASIN - see WESTERN PORT BASIN

WESTERN PORT BASIN

WESTRALIA GEOSYNCLINE

WILGA BASIN

WILLOCHRA BASIN

WILLOCHRA VALLEY ARTESIAN BASIN - see WILLOCHRA BASIN

YARROL BASIN

BIBLIOGRAPHY

ANDREWS, E.C., 1938 - The structural history of Australia during the Palaeozoic. Proc.Roy.Soc.N.S.W., 71, 118-187.

ATLAS OF AUSTRALIAN RESOURCES - Underground Water, 1953 - Dept.Nat. Dev., Canberra.

BLATCHFORD, T., 1927 - The geology of portions of the Kimberley Division, with special reference to the Fitzroy Basin and the possibilities of the occurrence of mineral oil. Bull.geol.Surv.W.Aust., 93, 1-56.

_____, 1930 - Boring for coal in Eradu District by State aid. Ann.Rep. for 1929, geol. Surv.W.Aust., 15-19.

BROWN, H.Y.L., 1900 - Geological map of South Australia, Adelaide.

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS, 1956 - Map of the elements of geology and structure of Australia. Lexique int. strat., 6(5a), opp. p.12.

CAMPBELL, W.D., 1910 - The Irwin River Coalfield and the adjacent districts from Arrino to Northampton. Bull.geol.Surv.W.Aust., 38.

CAREY, S.W., 1934 - The geological structure of the Werrie Basin. Proc.Linn.Soc.N.S.W., 59, 351-374.

_____, 1947 - Geology of the Launceston District, from Rec.Queen Victoria Mus., 1946, Launceston, Tas.

CHEWINGS, C., 1935 - The Pertatataka Series in Central Australia with notes on the Amadous Sunkland. Trans.Roy.Soc.S.Aust., 59, 141-163.

CLAPP, F.G., 1925 - Geology and geography of the North West and Desert Basins of Western Australia. Proc.Linn.Soc.N.S.W., 50, 47-66.

_____, 1926 - Oil prospects of the North West Basin of Western Australia. Econ.Geol., 21(5), 409-430.

CLARKE, E. de C., 1926 - Natural regions in Western Australia. J.Roy.Soc.W.Aust., 12 , 117-132.

COCHRANE, G.W., 1956 - The geology and hydrology of the Willunga Basin. Geol.Surv.S.Aust.Rep. of Investigations 8.

CONDON, M.A., 1954 - Progress report on the stratigraphy and structure of the Carnarvon Basin, Western Australia. Bur.Min.Resour.Aust. Rep.15.

CONDON, M.A., 1956 - Geological occurrence of oil and gas in Australia, Oil and gas symposium. Int.geol.Cong.20th Sess. 173-198.

_____, JOHNSTONE, D., and PERRY, W.J., 1953 - The Cape Range structure. Bur.Min. Resour.Aust.Bull. 21 (1), 6-42.

_____, and WALPOLE, B.P., 1955 - Sedimentary environment as a control of uranium mineralization in the Katherine-Darwin Region, Northern Territory. Bur.Min.Resour.Aust.Rep. 24.

CRESPIN, I., 1943 - The stratigraphy of the marine Tertiary rocks of Gippsland, Victoria. Min. Resour.Surv.Bull. 9.

DAVID, T.W.E., 1932 - Explanatory notes to accompany a new geological map of the Commonwealth of Australia. Coun.sci.ind.Res.Aust.

_____ (ed. BROWNE, W.R.), 1950 - THE GEOLOGY OF THE COMMONWEALTH OF AUSTRALIA. Arnold, London.

DULHUNTY, J.A., 1942 - The stratigraphical arrangement and occurrence of torbanite deposits in the Upper Kamilaroi coal measures of New South Wales. Proc.Linn.Soc.N.S.W., 67, 123-141.

DUNSTAN, B., 1898 - The Mesozoic coal measures of Stanwell, and associated formations. Parl.Pap., Brisbane.

ELLIS, H.A., 1936 - Report on some observations made on a journey from Alice Springs, Northern Territory, to the country north of the Rawlinson Ranges in Western Australia, etc. Ann.Rep.geol.Surv.W.Aust., 62-77.

ETHERIDGE, R., 1881 - A contribution to our knowledge of the Unionidae of the Launceston Tertiary Basin. Pap.Roy.Soc.Tas. for 1880, 18-23.

FAIRBRIDGE, R.W., 1953 - AUSTRALIAN STRATIGRAPHY, University of Western Australia.

FORMAN, F.G., 1930 - Notes on the geology and petroleum prospects of the Desert Basin of Western Australia. Ann.Rep.geol.Surv.W.Aust. for 1929, 21-23.

GENTILLI, J., and FAIRBRIDGE, R.W., 1951 - Physiographic diagram of Australia. The geographical Press, Columbia University, New York.

HILL, D., 1951 - Geology. Handbook of Queensland. Aust.Ass.Adv.Sci., Brisbane.

HILLS, L., REID, A.M., NYE, P.B., KED, H.G.W., and REID, W.D., 1922 - The geology of the coal-bearing formations of Tasmania from the coal resources of Tasmania. Geol.Surv. Tas.Min.Resour. 7, 5-7.

HOSSFELD, P.S., 1954 - Stratigraphy and structure of the Northern Territory of Australia. Trans.Roy.Soc.S.Aust., 77, 103-161.

JACK, R.LOGAN, 1879 - Report on the Bowen River coalfield. Brisbane. By authority.

JACK, R. LOCKHART, 1923 - The composition of the waters of the Great Artesian Basin in South Australia and its significance. Trans.Roy.Soc.S.Aust., 47, 316-321.

_____, 1930 - Geological structure and other factors in relation to underground water supply in portions of South Australia. Bull.geol.Surv.S.Aust., 14, 1-48.

JACK, R. LOGAN and ETHERIDGE, R., 1892 - THE GEOLOGY AND PALAEONTOLOGY OF QUEENSLAND AND NEW GUINEA, Brisbane.

JENSEN, H.I., 1912 - The building of eastern Australia. Proc.Roy.Soc.Qld., 23(2), 149-198.

_____, 1944 - The geology of Central Australia. Proc.Roy.Soc.Qld., 56, 85-94.

JOHNSTON, R.M., 1875 - The Launceston Tertiary Basin. Pap.Roy. Soc.Tas., 6, 53-62.

JOKLIK, G.F., 1952 - Geological reconnaissance of south-western portion of Northern Territory. Bur.Min.Resour.Aust.Rep.10.

_____, 1955 - The geology and mica-fields of the Harts Range, Central Australia. Bur.Min.Resour.Aust.Bull.26.

LIMB, J.M. and KENT, C.R., 1939 - Western Australian coal resources and their utilization. Railway and Tramway Mag., Perth.

LORD, J.H., 1952 - Collie mineral field. Bull.geol.Surv. W.Aust. 105(1).

MAITLAND, A.G., 1899 - The Collie coalfield. Ann.Rep.geol. Surv.W.Aust. for 1898, 13-21.

_____, 1901 - Extension of ARTESIAN water-carrying strata from South Australia. Ann.Rep. geol.Surv.W.Aust. for 1900, 28-31.

_____, 1907 - Possibility of the occurrence of artesian water in the Northampton and Geraldine Districts. Bull.geol.Surv. W.Aust., 26, 7-9.

_____, 1911 - Results of boring for artesian water on the Eucla Plateau. Ann.Rep.geol. Surv.W.Aust. for 1910, 13-14.

MAITLAND, A.G., 1913 - The artesian water resources of Western Australia in REPORT OF THE FIRST INTERSTATE CONFERENCE ON ARTESIAN WATER, 1912, Sydney (App.M) 115-129.

_____, 1919 - The artesian water resources of Western Australia. Extract from the MINING HANDBOOK. Mem.geol.Surv.W. Aust., 1 (2), 1-7.

_____, 1939 - The Donnybrook Sandstone Formation and its associates. J.Roy.Soc.W.Aust. 25, 177-195.

MATHESON, R.S., and TEICHERT, C., 1946 - Geological reconnaissance in the eastern portion of the Kimberley Division, Western Australia. Ann.Rep. Dep.Min.W.Aust. for 1945, 73-87.

MOTT, W.D., 1952 - Oil in Queensland. Qld.Govt.Min.J., 53, 848-861.

NEW GEOLOGICAL MAP OF SOUTH AUSTRALIA, EXPLANATORY NOTES, 1955 - Geol.Surv.S.Aust.

NOAKES, L.C., 1953 - The structure of the Northern Territory with relation to mineralization. Geology of Australian ore deposits. 5th Emp.Min.metall.Cong., 1, 284-296.

_____, "OPIK, A.A., and CRESPIN, I., 1952 - Bonaparte Gulf Basin, North Western Australia, in Symposium sur les Séries de Gondwana. Cong.géol.int., 19ieme Sess., Alger, 91-106.

_____, and TRAVES, D.M., 1954 - Outline of the geology of the Barkly Region, in Survey of Barkly Region, 1947-48. Sci.ind.Res.Org.Melb., Land Res.Ser. 3 (3), 34-41.

O'DRISCOLL, E.P.D., 1956 - The hydrology of the Willochra Basin. Geol.Surv.S.Aust.Rep.Inves. 7.

"OPIK, A.A., 1956a - Cambrian geology of Queensland, in El Sistema Cámbrico, su Paleogeografia y el Problema de su Base, Part 2, Int.geol.Cong., 20th Sess., Mexico, 1-24.

_____, 1956b - Cambrian geology of the Northern Territory, in El Sistema Cámbrico, su Paleogeografia y el Problema de su Base, Part 2, Int.geol.Cong., 20th Sess., Mexico, 25-54.

_____, 1956c - Cambrian palaeogeography of Australia, in El Sistema Cámbrico, su Paleogeografia y el Problema de su Base, Part 2, Int.geol.Cong., 20th Sess., Mexico, 239-284.

PITTMAN, E.F., 1895 - Note on the Cretaceous rocks in the north-western portion of New South Wales. Rep.Aust.Ass.Adv.Sci., 6, 344-348.

_____, 1914 - The Great Australian Artesian Basin and the source of its water. Geol. Surv.N.S.W., 57 pp.

RAGGATT, H.G., 1954 - The search for oil in Australia and New Guinea. Bull.Aust.Inst.Min.Metall., 172 (suppl).

REEVES, F., 1951 - Australian oil possibilities. Bull. Am.Ass.Pet.Geol., 35(12), 2479-2525.

REID, J.H., 1924-25 - Geology of the Bowen River coalfield. Qld.Govt.Min.J., 25, 399-411; 447-456; 26, 4-11.

_____, 1929 - Geology of the Bowen River coalfield. Qld.geol.Surv.Pub., 276.

REPORT OF THE FIRST INTERSTATE CONFERENCE ON ARTESIAN WATER, 1912. Sydney, 1913.

REPORT OF THE SECOND INTERSTATE CONFERENCE ON ARTESIAN WATER, 1914. Brisbane, 1915.

REPORT OF THE THIRD INTERSTATE CONFERENCE ON ARTESIAN WATER, 1921. Adelaide, 1922.

REPORT OF THE FOURTH INTERSTATE CONFERENCE ON ARTESIAN WATER, 1924. Perth, 1925.

REPORT OF THE FIFTH INTERSTATE CONFERENCE ON ARTESIAN WATER, 1928. Sydney, 1929.

RUDD, E.A., 1951 - Oil in Australia? Suppl. to Bull. Aust.Min.Metall., Sept.

SCHUCHERT, C., 1928 - Review of late Palaeozoic formations and faunas, with special reference to the ice-age of mid-Permian times. Bull.Am.geol.Soc., 39.

SPRIGG, R.C., 1952 - Sedimentation in the Adelaide Geosyncline and the formation of the continental terrace. Univ. of Adelaide, Sir Douglas Mawson Anniversary Volume, 153-159.

_____, 1957 - Summary report on the petroleum possibilities of the central portions of the Great Australian Artesian Basin. Geosurveys of Aust. Ltd., (unpubl.).

STEWART, G.A., 1954 - Geomorphology of the Barkly Region, in Survey of Barkly Region, 1947-48. Sci.ind.Res.Org.Melb., Land Res.Ser. 3, 42-58.

STRZELECKI, P.E. de, 1845 - PHYSICAL DESCRIPTION OF NEW SOUTH WALES AND VAN DIEMAN'S LAND, London.

SUSSMILCH, C.A., 1935 - The Carboniferous period in eastern Australia. Rep.Aust.Ass.Adv.Sci., 22, 83-118.

TALBOT, H.W.B., 1910 - Geological observations in the country between Willuna, Hall's Creek, and Tanami. Bull.geol.Surv.W.Aust., 39, 82-83.

TEICHERT, C., 1939 - The Mesozoic transgressions in Western Australia. Aust.J.Sci., 2(3), 84-86.

_____, 1947 - Stratigraphy of Western Australia. J.Roy.Soc.N.S.W., 80(3), 81-142.

THOMAS, D.E., 1955 - Underground water. Vic.Dep.Min., Min.geol.J., 5(4-5), 5-12.

THYER, R.F. and EVERINGHAM, I.B., 1956 - Gravity survey of the Perth Basin, Western Australia. Bur.Min.Resour. Aust.Bull. 33.

TRAVES, D.M., 1955 - The geology of the Ord-Victoria region, Northern Australia. Bur.Min.Resour. Aust.Bull. 27.

_____, CASEY, J.N., and WELLS, A.T., 1956 - The geology of the south-western Canning Basin, Western Australia. Rep.Bur.Min.Resour.Aust. 29.

_____, and STEWART, G.A., 1954 - Hydrology of the Barkly Region in Survey of Barkly Region, 1947-48. Sci.ind.Res.Org. Melb., Land Res.Ser. 3, 59-64.

VOISEY, A.H., 1939 - The Lorne Triassic Basin and associated rocks. Proc.Linn.Soc.N.S.W., 64, 255-265.

WALPOLE, B.P., 1958 - The Maranboy tinfield, Northern Territory. Bur.Min.Resour.Aust.Bull. 37.

WARBURTON, P.E., 1875 - A journey across the western interior of Australia. S.Aust.Parl.Pap. 28.

WARD, L.K., 1946 - The occurrence, composition, testing, and utilization of underground water in South Australia, and the search for further supplies. Bull.geol.Surv. S.Aust., 23, 1-281.

WHITEHOUSE, F.W., 1936 - The Cambrian faunas of north-eastern Australia. Mem.Qld.Mus., 11, 59-112.

_____, 1953 - The Mesozoic environments of Queensland. Rep.Aust.Ass.Adv.Sci., 29, 83-106.

_____, 1955 - The geology of the Queensland portion of the Great Artesian Basin. App. C to Artesian Water Supplies in Queensland. Dep.Pub.Wks.Qld., 1-20.

WILSON, R.C., 1922 - The Wilga coalfield. Ann.Rep.Geol.Surv. W.Aust. for 1921, 30-37.

WOODS, J.E.T., 1883 - Physical structure and geology of Australia. Proc.Linn.Soc.N.S.W., 7, 371-389.

WOODWARD, H.P., 1907 - On the country between the Ashburton and Manilya Rivers, with a view to determining the northward extension of the Gascoyne Artesian Area. Bull. geol.Surv.W.Aust. 27, 10-13.

_____, 1915 - The coal resources of Western Australia. Bull.geol.Surv.W.Aust. 64, 7-11.